

A Corporate Publication of Santee Cooper

POWERSOURCE

SUMMER 2009



from the CEO

In fulfilling our mission to be the state's leading resource for improving the lives of all South Carolinians, Santee Cooper puts utmost importance on our primary responsibility: to provide our customers with low-cost, environmentally protective and reliable electricity that provides jobs, improves quality of life and encourages economic development.

Holding the cost of power down has proven especially difficult the past couple of years and looks to become even more challenging. Fuel to power our generating stations has increased of course, and we continue to communicate the fuel story to our customers as we work with them on energy efficiency measures that can help them offset the rising cost of fuel.

Other generation costs have increased as well, from the price of materials used to maintain stations to the costs associated with environmental control technology that Santee Cooper has installed. Environmental control technology accounted for one-third of the cost of our newest generating unit, Cross Unit 4, for example.

Santee Cooper last raised our base rates in 1996. Since then we have nearly doubled our generating capacity and invested more than \$2 billion in new generation, transmission and distribution, all to serve a customer base that has grown by nearly 60 percent. In that same time period, the number of employees has increased just 3 percent, and so I am confident that we have stretched our current rate structure as far as possible.

We know that this is an especially difficult economic time, and we have put off a base rate increase as long as we could. We have asked our board of directors to consider a new two-year rate increase and restructuring proposal, with overall annual charges rising an average 4.4 percent in the first year, beginning November 2009, and 5.5 percent in year two. We have aggressively sought public input to help inform our

board of directors as they prepare to vote on the request in August.

Santee Cooper's rate proposal includes an innovative new structure too, that reflects the higher cost of producing power in the summer months, and the lower cost of producing power in other months. In addition to helping us capture costs specific to the season, the proposed new rate structure sends a strong price signal to customers that will encourage them to conserve energy year-round.

Building on that theme and our decades of energy efficiency programming, Santee Cooper is launching new initiatives this year that will help customers further cut their energy use. Energy efficiency is a key part of Santee Cooper's plan to continue meeting the energy needs in a manner that satisfies our customers, encourages new job creation and helps current South Carolina businesses prosper.

Santee Cooper offers value to South Carolina in many ways, from maintaining public access to lakes Moultrie and Marion to leading economic development efforts in rural communities, and affordable, reliable and environmentally protective power is the cornerstone to all we do. It is our 75-year history; it is South Carolina's future.



Lonnie N. Carter
President and Chief Executive Officer



santee cooper



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I N T H I S I S S U E

Recession No Slowdown for Developing Economies

By Mollie Gore Photos by Jim Huff



When Carolina Food Service of Loris welcomed guests to its ribbon-cutting ceremony June 17, the event represented the culmination of about 15 years of advance work by Santee Cooper and a partnership of economic development professionals in the Myrtle Beach region.

Instant gratification is a foreign concept to economic developers, and Santee Cooper is busy working with many who see this recessionary economy as an opportunity to position themselves for the recovery. When it comes, they want to be ready.

Santee Cooper's mission is to be the state's leading resource for improving the lives of all South Carolinians. The utility does this primarily through providing low-cost, environmentally protective and reliable power that attracts and retains companies that provide jobs and revenues to the state. Santee Cooper also works directly and through the South Carolina Power Team to help localities identify prospects and bring those prospects a solid proposal for relocating or expanding.

The Carolina Food Service story is a case in point.

Some 15 years ago, Santee Cooper identified Loris as an area to focus on in terms of bringing in industry and jobs. After evaluating existing resources and consulting with local affiliates including the city of Loris, Horry County and the Myrtle Beach Regional Economic Development Corp., Santee Cooper opted to build the Loris Commerce Center as an industrial development the region could market to prospective industries.

The first tenant was Loris Industries. Two years ago, the team gathered to welcome Builders FirstSource, a national name in the center. Builders FirstSource had just opened a \$5 million truss manufacturing plant at the facility.

Carolina Food Service President Legrande Dorman welcomes guests to the grand opening of the restaurant supply business in Loris.



This display showcases some of the products that Carolina Food Service will stock. Plans call for the new Loris firm to hire up to 25 employees at the Loris Commerce Center.

Horry County Councilwoman Liz Gilland hailed that ribbon-cutting as a harbinger of things to come. "They make the Loris Commerce Center a more exciting, viable enterprise," she said. "The effect will be magnetic."

Today, other tenants are in place. The Horry County State Bank is building a new, larger operations center that meets the needs of its growing business. The commerce center gave the bank the flexibility to grow and still remain in the Loris community.

Santee Cooper also decided to build its first shell building as another way to draw tenants to the Loris Commerce Center, said Mike Brown, the utility's manager of economic development. "That was a big step for us, and it has really paid off. We were able to bring in a unique restaurant supply business that can serve the entire Horry County area, including Myrtle Beach, and keep those dollars from leaving the region. That's a victory for Loris, for Horry County, for the restaurants in business there and for this new venture, Carolina Food Service. They have just opened and they are already exceeding expectations."

Santee Cooper announced in June plans to help fund another shell building, this time in Bamberg. In that venture, the utility is working with the Southern Carolina Regional Development Alliance.

Santee Cooper also works with The Electric Cooperatives of South Carolina through the Palmetto Economic Development Corp., which operates today as the South Carolina Power Team. Since beginning a new incentive program in 2006, the Power Team has committed more than \$1.8 million in grants to local agencies to certify sites, provide professional development and help with strategic planning for economic development agencies such as the Southern Carolina Regional Development Alliance, the Central Carolina Economic Development Alliance, the Upstate Alliance and the North Eastern Strategic Alliance (NESA).



American Gypsum's new Georgetown wallboard plant uses synthetic gypsum from Santee Cooper's Winyah Generating Station in its product. Santee Cooper helped draw the industrial plant to Georgetown, and it opened last year.

Santee Cooper's experience in 2008 shows that even in a recession, companies are looking for new location opportunities. All told last year, the efforts of Santee Cooper and its partners resulted in 2,385 new jobs and

\$519.3 million in capital investments. The work to land some of that goes back years, as the Carolina Food Service example shows.

Building for the future, Santee Cooper accompanied alliance representatives and others to a major trade show in Chicago in late June, the National Plastics Expo, which meshes with NESAs new focus. "In this economy, everybody's looking at cost-saving opportunities," McKay said. "We know we're a good place to do business. We're also a very cost-effective place to do business. The message to plastics is access to market and affordable and reliable power. We're fortunate to have a good partner in Santee Cooper.

They're leading the charge for us during this trade show."

In addition to working the booth, McKay had appointments set with several prospects. "I think it's the most opportune time for us to be out. We can show and quantify to a number



For example, Santee Cooper has a long relationship with NESAs, the regional economic development agency that includes nine counties in the state's northeastern corner, including Horry and Florence.

At this higher level, Santee Cooper can help the region pool resources and target efforts to recruit and retain industry. Santee Cooper funded a target industry study for NESAs that helped the region redirect and refocus some of its economic development initiatives.

From that study, "we put a little more focus on the Canadian market, the Toronto and Montreal areas," said Jeff McKay, NESAs executive director. "We also looked more closely at plastics and sectors such as the "green job" area — alternative energy, biofuels, emerging markets like that. It's paid off very well. We have been able to get into some doors that we probably wouldn't have thought about, had we not had a different set of eyes helping us with it, and we were able to do so in a down economy."

In June, Johnson Controls Inc. announced plans to build a lead acid battery recycling facility in the Florence area employing 250 people and representing \$100 million. "It was one of those successes that came from this new focus," McKay said. "Had we not been out there, I don't know that we would have had this opportunity."

of companies how we can save them money through a location in our region. That's a message that plays well right now."

Berkeley County is just beginning the strategic planning process that McKay says has helped NESAs focus. Santee Cooper again is providing most of the funding for that planning process.

Berkeley County Supervisor Dan Davis noted that as part of the greater Charleston area, Berkeley puts a lot of resources into

marketing itself through the Charleston Regional Development Alliance. "The strategic planning process will help us make sure we're allocating all of our resources appropriately and touching all of the businesses we need to touch," he said.

A priority now for Davis is marketing the Jedburg area, and the county continues to promote sites remaining in the Mt. Holly Commerce Park that Santee Cooper developed with Alcoa-Mt. Holly and Berkeley County several years ago.

"You know, Google located in Mount Holly. That's where having developed sites makes such a difference," Davis said. "Santee Cooper works constantly to identify sites for a potential client, whenever we have that opportunity."



Santee Cooper helped recruit Nucor Steel to Berkeley County in 1995.

It makes sense to have the electric utility involved for another reason, Davis noted — industries are large consumers of electricity, and the utility needs to be ready to handle that new demand. Santee Cooper was part of the team that brought Nucor Steel to Berkeley County in 1995, and that announcement was not only significant for the county, but the major industrial announcement for the entire state that year. Nucor is one of Santee Cooper's largest industrial customers today.

Davis meets regularly with an economic development group that includes representatives from Santee Cooper. "And whenever I encounter a challenge in this area, Santee Cooper's always the first place I call for help or advice." **PS**



Santee Cooper, Center for Hydrogen Research Advance Hydrogen Economy

By Kevin F. Langston
Photos by Jim Huff

On a warm and appropriately sunny May 15, more than 100 dignitaries from throughout South Carolina gathered at the Center for Hydrogen Research near Aiken to dedicate a 20-kilowatt solar installation that could help fuel South Carolina's budding hydrogen economy.

The photovoltaic array is a research initiative to advance hydrogen generation from renewable energy sources. Panels capture sunlight on the roof of the Center connected to the Education, Training and Development Laboratory and in a ground-level solar park that provides educational opportunities to school groups and other interested parties.

It is the latest research initiative at the growing \$10 million Center for Hydrogen Research (CHR), home to the Savannah River National Laboratory, the International Thermonuclear Reactor hydrogen production office, the University of South Carolina Aiken biohydrogen initiative and Toyota Motor Co. Aiken County constructed the CHR to build on the area's existing research infrastructure, and the Economic Development Partnership manages it.

Late last year, Santee Cooper donated \$230,000 to the CHR for the solar installation and an onsite and Internet-based education and research system.

"The Center for Hydrogen Research will be an excellent catalyst for developing initiatives that can benefit electric utilities and their customers. This project has the potential to maximize an already-

(Opposite) Fred Humes, director of the Economic Development Partnership and the Center for Hydrogen Research (CHR), addresses a crowd of dignitaries who gathered May 15 at the CHR for the dedication of a 20-kW solar installation that is being used in the development of hydrogen fuel cells.

Dr. Scott Greenway, president and CEO of Columbia-based Greenway Energy LLC, shows the hydrogen distribution panel within the CHR's Education, Training and Development Laboratory.

growing hydrogen economy in South Carolina, and that's a goal we can all get behind," said Lonnie Carter, Santee Cooper president and chief executive officer.

One obstacle to the large-scale use of solar energy is storing the energy for use when the sun isn't shining. Hydrogen can be stored and transported, and has therefore emerged as a recognized solution with applications for electrical generation and powering vehicles. Most hydrogen in the U.S. is produced through a process called steam reforming, where hydrogen atoms are separated from carbon atoms in methane. Renewable energy-sourced hydrogen is a fast-growing research and development field across the country.

The photovoltaic array in Aiken converts sunlight into electricity, which then produces hydrogen through electrolyzing water. Hydrogen can be converted back to electricity using fuel cells or can be used to power hydrogen-fueled vehicles. Although the Obama administration recently proposed cutting research dollars for hydrogen-powered vehicles, researchers are optimistic that funds will



continue to flow into fuel-cell generators and other potential applications.

“These rooftop panels are the primary producer for our hydrogen,” said Ernest S. Chaput, the special projects director for the Economic Development Partnership. “When they’re not producing hydrogen, they power systems in the building or send the excess electricity back to the grid.”

Fred Humes, director of the partnership and the CHR, told the crowd May 15 that Santee Cooper’s grant enabled the CHR to begin working on these solar applications. “As we look at the technologies of the future, hydrogen will play a major role,” Humes said. “We already have fuel cell forklifts operating on a daily basis in Aiken County. This solar-to-hydrogen technology may well give our industries an independent source of hydrogen to fuel their forklifts, give NetZero homes a way to store excess energy generated by their solar panels, and one day could lead to independent hydrogen fueling stations for vehicles.”

CHR’s Education, Training and Development (ET&D) Laboratory is a 1,100-square-foot hydrogen research, development and demonstration laboratory module. Its primary purpose is to house a regenerative fuel cell backup power system with features to support education and outreach, worker training and equipment and systems development.



“This is a project that could revolutionize the field of hydrogen generation using renewable energy sources,” said Lonnie Carter, Santee Cooper president and CEO.

“There’s an educational component to what we’re doing and a developmental component to what we’re doing,” Humes said. Aiken Technical College is using the ET&D laboratory as part of its curriculum, just one example of the research and outreach taking place. “You’re not going to find another facility like this anywhere.”

Chaput added, “Other people are coming to look at what we’ve done here so they can replicate it and take it further.”

Aiken County Council Chairman Ronnie Young said the project is an example of how Aiken County can leverage its technology base into jobs and industries for the future. “Aiken County has the opportunity to lead the way in this new technology and will not stand by the roadside as others capitalize on hydrogen and fuel cell technology. This is evidenced by Aiken County Council’s foresight to develop the Savannah River Research Campus and the Center for Hydrogen Research.”

Santee Cooper’s Green Power program provided funding for the solar-to-hydrogen project. The state’s 20 electric cooperatives - including Aiken Electric Cooperative -



support and promote Green Power, which is renewable electricity that Santee Cooper generates for its direct customers and South Carolina’s electric cooperatives.

Santee Cooper was the first utility in South Carolina to generate and sell renewable Green Power, beginning in 2001 at the Horry County Landfill Generating Station. Today it operates four landfill generating stations, which use naturally occurring methane gas as their fuel source, and has installed small solar installations at schools across the state. The 20-kW solar array is Santee Cooper’s largest solar installation to date.

Gary L. Stooksbury, chief executive officer of Aiken Electric Cooperative, noted that the project is supported by people who are paying a premium for renewable energy. “Sales of Santee Cooper-generated Green Power, supported by the electric cooperatives, are used to enhance and expand renewable programs in South Carolina. Aiken Electric Cooperative is pleased that our member-owners recognize not only the value of sustainable energy, but also the unique position of the Aiken area to develop potential new industries.” **PS**

This monocrystalline photovoltaic panel is part of the 20-kW solar installation at the CHR.

The Boys of Summer

BY KEVIN F. LANGSTON

PHOTOS BY JIM HUFF



myrtlebeachpelican



With hundreds of area youth among the 3,089 fans attending Education Day at BB&T Coastal Field on May 27, left-handed Myrtle Beach Pelicans pitcher Richard Sullivan threw a complete-game shutout in a 6-0 win over the Winston-Salem Dash.

Sullivan struck out nine, walked two and scattered three hits in the Pelicans' first series victory of the season, which began April 9. It also marked the club's first complete-game shutout since May 17, 2007.

Everything on the field seemed to go the Pelicans' way that day, including some timely hitting and key defensive plays.

What you won't read in the game recap or see documented in any record book is the all-star performance from the Pelicans off the field.

Since debuting in 1999, fans have cheered on Pelicans like Rafael Furcal, Jarrod Saltamacchia, Jeff Franceour, Adam LaRoche, Brad Clontz, Mark DeRosa, Marcus Giles and Brian McCann who've gone on to have successful major league careers. All the while, a committed front office and staff have been dedicating themselves to Myrtle Beach and its boys of summer. This team behind the team is comprised of workers seen and unseen who rally to show fans of all ages a fun time.

(Top) In just his fifth start for the Pelicans, southpaw Richard Sullivan treated the fans attending Education Day to a complete-game shutout in a 6-0 victory over the Winston-Salem Dash.

(Bottom) Pelicans outfielder Jon Mark Owings fouls off a pitch from Dash pitcher Johnnie Lowe in a 3-2 loss in front of 3,549 fans on May 28. The Pelicans took two of the series' three games against the Dash.



Some of the sights from Education Day at BB&T Coastal Field, including Santee Cooper Community Relations Representative Brandy Nelson and Director of Educational Programs Barbara Allen handing out educational packets to students from area schools.



“We want them to feel like this is their hometown team,” says Director of Community Relations Julie Borshak. “It’s a privilege to have a professional sports team in your area, and we want people to get behind the boys and really promote them, because it helps them play better. When they’ve got a packed house of people cheering for them, they honestly play better.”

The Myrtle Beach Pelicans are an Advanced-A minor league affiliate of the Atlanta Braves and play in the Southern Division of the Carolina League. Previously, the franchise was known as the Durham Bulls, which was immortalized in the 1988 Kevin Costner romantic comedy, “Bull Durham.”

After the 1998 major league expansion added the Tampa Bay Devil Rays and Arizona Diamondbacks, the Bulls relocated to Danville, Va., as the 97s for one year before settling in Myrtle Beach as the Pelicans in 1999. A new Bulls franchise came to Durham in 1998 as a Triple-A affiliate of the Tampa Bay Rays.

The Pelicans were the first minor league ball club to call the Grand Strand home since the Myrtle Beach Hurricanes (formerly the Myrtle Beach Blue Jays) were dissolved in 1992. The Pelicans advanced to the Mills Cup championship in their first season, but the series was canceled

(Top) Students from North Myrtle Beach Christian School cheer on the Pelicans during Education Day. Students and teachers from area schools made up the bulk of the 3,089 fans who watched the Pelicans defeat the Winston-Salem Dash 6-0.

(Bottom) Director of Community Relations Julie Borshak captures some of the fanfare.



abruptly when Hurricane Floyd made landfall. The Pelicans were subsequently named co-champions with the Wilmington Blue Rocks; the team would win the Mills Cup outright the following season.

The Carolina League quickly caught up with the Pelicans, who have not secured a Mills Cup title since the 2000 campaign in spite of some successful seasons along the way. In its 64-year history, the Carolina League has established itself as one of baseball’s premier minor leagues. Former Carolina Leaguers in the National Baseball Hall of Fame include Earl Weaver, Willie McCovey, Carl Yastrzemski, Tony Perez, Joe Morgan, Johnny Bench, Rod Carew and Wade Boggs.

Although league championships have eluded the Pelicans these past eight seasons, they retain a devoted fan base and have earned prestigious accolades from the community. The organization was honored last year with the Community Service Award from the Myrtle Beach Area Chamber of Commerce in recognition of initiatives like Splash’s Student All-Star program, Dinger’s Summer Reading Program, Pink Ribbon Night, Bark in the Park night, the Youth Diamond Fund and others.

“That was the most rewarding thing,” Borshak says. “I work with almost every nonprofit in the area, and that is really what keeps me going.”

Borshak has spent three years with the Pelicans organization. What began as a part-time position soon became a full-time labor of love.

“During a typical day, you’ll see me all over the ballpark and around the community,” she says. “The more we get out in the community, the more people will realize this is a fun place to be.”

A typical day for most Pelicans staff begins at 8:30 a.m. and runs through the end of the game.

(Top) Facility Operations Manager Mike Snow gives a close-up look at one of the many 1500-watt GE Multi-Vapor lamps that are used to illuminate BB&T Coastal Field, powered by Santee Cooper.

(Bottom) Pelicans infielders Donell Linares and Freddie Freeman join pitcher Cole Rohrbough at the mound on May 28 for the singing of the national anthem by students from Burks Christian School.



“We may work from 8:30 a.m. to 11 p.m. eight days in a row,” Borshak says. “We truly are like a family, because we work such long hours together. I couldn’t ask for better people to work with.”

As part of her game-day duties, Borshak oversees the mascots and coordinates the between-inning hijinks that are the hallmark of minor league baseball games.

“What people don’t realize is we have a game script that we follow,” Borshak says. “We have a meeting in the morning where we’ll come together and go over the groups that are coming in, what special needs they might have: Are they going to be in an on-field game; do they need a first pitch; are they going to have a concourse table? We go over all of that with the entire staff, and then we’ll have a production meeting in the afternoon to go over the game script. Every single inning is scripted. We know who is supposed to be at what dugout and when.”

When something doesn’t go according to the script, Facility Operations Manager Mike Snow is usually called in. In addition to supervising the security, first aid, ushers and parking attendants, Snow is in charge of the everyday upkeep of BB&T Coastal Field.

“We spend a lot of time cleaning the ballpark and taking care of daily maintenance: changing light bulbs, troubleshooting any electrical or plumbing problems,” he says. “If



(Top) Fans watch the Pelicans attempt a late-inning comeback against the Winston-Salem Dash on May 28. The Pelicans went 1-for-13 with runners in scoring position, stranding 18 runners on base.

(Bottom) Pelicans mascot Splash greets kids at home plate after a 6-0 win against the Dash on May 27. Kids Run the Bases has become a beloved post-game ritual at BB&T Coastal Field.



it’s anything major, we’ll bring in the city because it’s a city-owned ballpark.” Santee Cooper provides electricity to the complex.

Like Borshak, Snow says there’s really no such thing as a typical game day.

“It really depends on if it’s the first day of a home stand, or the day after an off day, or the day after a game,” he says. “One of my guys usually gets here around 6 a.m. to start cleaning the ballpark, and that usually takes us about six hours. I will get here between 8:30 and 9 and stay through the end of the game.”

Snow has been with the Pelicans for five years and has spent time with the Daytona Cubs in Florida, the Helena Brewers in Montana and the Carolina Mudcats in North Carolina.

“The best thing about working here is you’ve got the beach,” he says. “I like to tell my staff that every night is a Saturday night in Myrtle Beach during the summer. Everyone’s on vacation and here to have a good time, and we want to be a part of that experience.

“We have the hardcore local fans and season ticket holders we see throughout the season, but we’ve also got a large tourist population who might only come for one game. So we have one chance to make an impression on those fans,” Snew said.

Borshak says some of the season ticket holders are members of the booster club, and each booster club member adopts a player during the season.

“When those players go on the road, they get a bag that is filled with their favorite snacks,” she says. “They’ll pick them up at the airport. They help their families make arrangements when they travel. They take them to doctor’s appointments. They look after these players as if they were their own kids.”

It’s this kind of outpouring of affection that typifies the relationship between Myrtle Beach and its Pelicans.

“Our owner always says we’re not in the baseball business, and we’re not in the entertainment business. We’re in the memory-making business,” Snow says. **PS**

BB&T COASTAL FIELD	
◆ Groundbreaking: March 11, 1998	
◆ Cost of Construction: Approximately \$13 million	
◆ Seating Capacity: 5,200 fixed seats; up to 6,000 with standing room	
◆ Number of Luxury Suites: 9 (24 person capacity in each)	
◆ Field Dimensions: RF: 328'; LF: 308'; CF: 400'; outfield wall is 8 feet high from right field to the left-center field alley. From left-center field alley to the left field foul pole the outfield wall is 6 feet high	
◆ Seating Bowl: Seats are from Fulton County Stadium, former home of the Atlanta Braves	
◆ How BB&T Coastal Field Stacks Up: In 2004, Baseball America rated the home of the Pelicans as the #2 ballpark in the country at the Class-A level	
◆ First World Record Broken: Most People Wearing Groucho Marx Glasses at the Same Time - 1,827 funny looking Pelicans fans (June 7, 2005)	
◆ First Streaker: Name Unknown (September 1, 1999)	
◆ First Car to Go Through the Outfield Wall: A car had veered off of 21st Avenue North and crashed into the left field wall. Nobody was injured. (August 29, 2000)	
CAROLINA LEAGUE TEAMS	
Northern Division	Southern Division
Frederick Keys Baltimore Orioles affiliate	Salem Red Sox Boston Red Sox affiliate
Potomac Nationals Washington Nationals affiliate	Winston-Salem Dash Chicago White Sox affiliate
Wilmington Blue Rocks Kansas City Royals affiliate	Kinston Indians Cleveland Indians affiliate
Lynchburg Hillcats Pittsburg Pirates affiliate	Myrtle Beach Pelicans Atlanta Braves affiliate



Santee Cooper headquarters in Moncks Corner sustained only superficial damage, but the total damage to the state was over \$6 billion.

Lessons We Learned

from Worst

Storm in Our

History

By Morgan Bradham

Photos by Jim Huff

H

“HUGO, WE GO,” broadcast a Myrtle Beach hotel marquee in late September 1989. As the Category 4 hurricane spun its way toward the South Carolina shoreline, the thriving tourist city, like much of the coast, quickly became a ghost town. At 6 a.m. on Sept. 21, the governor issued a mandatory evacuation order for several areas including Myrtle Beach, the core of Santee Cooper’s retail service area. That evening and into the early morning of Sept. 22, Hurricane Hugo ravaged the state, leaving behind more than \$6 billion in damages.

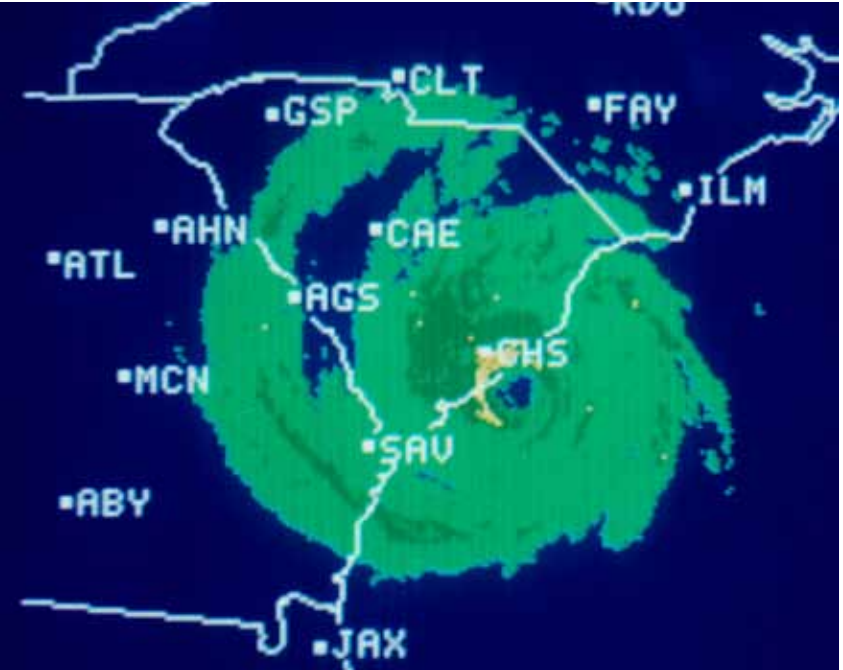
Hugo also left Santee Cooper without the ability to generate power for the first time in its history. “It was a nightmare of a storm,” recalled Zack Dusenbury, vice president of retail operations. Winds up to 150 miles an hour had destroyed the 3,000 miles of transmission and distribution lines that energized Santee Cooper country. This total system blackout affected all 85,000 retail customers, three military bases, 27 of 30 large industries, 13 of 15 electric cooperatives and one municipal customer.

The 20th anniversary of Hurricane Hugo is this fall. Several key employees who led Santee Cooper through the storm’s aftermath took time recently to reflect on the storm, the many positives that happened during restoration of service and the lessons the utility learned from the event.

Hurricane Hugo was born on September 13, just a week before his catastrophic visit to the Carolinas. Hugo soon became a Category 4 hurricane, gaining intensity in the Virgin Islands and killing 13 people there on Sept. 17.

Bill McCall, Santee Cooper executive vice president and chief operating officer, was the head of generation in 1989. He recalled being in the dispatch center at the Moncks Corner headquarters when Hurricane Hugo made landfall, and he and his family spent the night in the auditorium alongside many other employees.

This satellite image of Hurricane Hugo was taken the day of the storm, Sept. 21, 1989.



At the time of the evacuation order, Hugo was reduced to a Category 3, but 12 hours later had regained his status as a Category 4 hurricane.

“Hugo was originally forecasted to go to Hilton Head, but not only did the storm’s path change, it increased in intensity and left us only a couple of hours to prepare,” McCall said. “Hugo made landfall in the McClellanville and Awendaw areas that evening and moved as far inland as Charlotte.”

The Aftermath

The next morning, many South Carolinians were shocked to see only flattened landscape where majestic pines once stood. The timber business in South Carolina would take years to recover, leaving many without jobs.

More shocking, however, was the realization that the entire Santee Cooper system was down, resulting in a complete blackout for customers across much of the state.

Of all the challenges and events that surrounded Hugo, the blackout is McCall’s most prominent memory. “It was the loneliest feeling in the world,” he said. “The sense of helplessness was overwhelming.”

R.M. Singletary, senior vice president of corporate services, was then the manager at Jefferies Generating Station. He also spent the night of the landfall at the Moncks Corner headquarters. The next morning, after discovering that there was no communication with the generating stations, he made his way to Jefferies, weaving his vehicle around the many fallen trees that littered U.S. Highway 52.

“Since all telephone lines were down, we had to revert to the Pony Express to deliver instructions,” Singletary said with a laugh. “It wasn’t quite that bad. I was able to make it to Powerhouse Road, and by that time, some of the employees had cut a path through the debris on the road and I was able to get to the power plant.”



“A priority early on was getting power flowing again to the water and sewer system.”

Restoration

Later that day, fleets from surrounding states swarmed into South Carolina. More than 400 workers from utilities including Georgia Power, Jacksonville Electric Authority and Florida Power and Light worked long shifts of 16 hours on, eight hours off, often working by flashlight.

McCall recalled that a priority early on was getting power flowing again to the water and sewer system, at least one grocery store, a gas station, and a restaurant, so that the crews had somewhere to eat. Restoration in the Berkeley County area began at Jefferies because it was able to facilitate a “black start.”

“The small hydroelectric unit at Jefferies is powered by water and has a battery power supply,” said Singletary. “We used a portable diesel generator to aid in starting the hydro unit, so that we could feed power back into Moncks Corner. This was a moral victory and very rewarding. Ultimately, we were able to restore power to Moncks Corner for water and sewage very quickly.”

Since Jefferies was the first to

have electricity in Berkeley County, the generating station became temporary shelter for many and was quickly dubbed the “Hydro Hilton.” A large conference room substituted for a barracks for the out-of-town workers so they had access to showers and restrooms.

In Myrtle Beach, Dusenbury was then the office manager and was struggling with some of the same problems. Crews were steadily pouring in from other utilities, and he needed a way to feed them while they labored to get power restored to the core of Santee Cooper’s retail customer base. Dusenbury contacted a local customer who ran a sandwich shop in Conway.

“I asked him, if we provided electricity, would he prepare a simple meal — fried chicken and biscuits — for the crew,” Dusenbury recalled. “He readily agreed, then asked an estimate of the number of biscuits he would need. I told him 800, and he was unfazed, but the cooks behind him looked as if they would faint!”

(Opposite) Santee Cooper’s entire transmission and distribution system was destroyed by Hurricane Hugo, resulting in a total system blackout. Santee Cooper crews and over 400 visiting utility members worked diligently to reenergize the system.

A container of wood chips at Jefferies Generating Station was emblazoned “Hugo,” with a date that few longtime South Carolinians will forget. Jefferies used wood chips made from uprooted trees to generate power after Hurricane Hugo.





The Francis Marion National Forest suffered many fallen trees, hurting the timber business in South Carolina over the following years.

often to cut trees to gain access to customers and to lines. It was a slow process. Full restoration across Santee Cooper’s service area would ultimately take one month.

“I remember bathing myself and my children in the lake,” said Claudette McCall, Bill’s wife.

Bill McCall, a huge football fan, compared Hugo to a state football championship game. The employees rallied to provide unsurpassed

customer service during this crucial time, he said, much like a team rallies to win a high-stakes game. “In terms of customer service, Hugo was our time to shine. Our employees responded to our customers’ needs with absolute dedication. They put the company over themselves.

“The response time means a lot,” McCall continued. “Our crews communicated well with the public and let them know that they were doing everything they could to get their power back. The customers were so appreciative that they even provided soup and coffee to the crews.”

we were without station service power,” said Mitchum. “The hot turbine rotors had to be turned off manually until the emergency generator could be started to supply station service. This required several employees on each turbine, in temperatures in excess of 100 degrees. Being at work, none of us even knew if our families were safe at home, and still our employees focused on the job. I can tell you, though, it was a wonderful thing to hear that the families were safe the next morning.”

Santee Cooper crews encountered many challenges in the restoration. Most roads were not passable, and so the first task was

Myrtle Beach also performed a “black start.” The combustion turbines in Myrtle Beach supplied power to the coal-fired units. Mitch Mitchum, now Winyah Generating Station’s manager and operations superintendent there at the time, remembers sending out crews to repair transmission lines so they would have a way to transport power when Winyah was generating again.

Mitchum was at work at Winyah when Hugo came through.

“I will never forget the teamwork of the employees when the units tripped off and

Lessons

Hugo presented quite a challenge, devastating a wide area — nearly the entire South Carolina coastline. It created a renewed focus on emergency planning at Santee Cooper.

“As Hugo arrived, we did not realize the scope of what we were up against,” said Singletary. “There are now measures in place to ensure that we are able to communicate if we experience another natural disaster such as this, covering not just the equipment we’ll use but also the order of notification and contingencies. Communication is vital.”

Dusenbury calls the smaller hurricanes that have followed Hugo good trial runs for the emergency action plan that Santee Cooper maintains since that fateful September. Santee Cooper plans for hurricane season by regularly updating and following the Emergency Action Plan for Power System Disasters. The Energy Control Center monitors weather conditions and if needed, directs restoration of the transmission system.

Diane Bell, manager of distribution planning and technical operations, plays a key role in planning for and responding to storm damage. Employee cross-training, to make sure that all restoration functions are covered quickly and efficiently, has become a key focus, Bell noted.

“By June 1 of each year, training is underway or completed for every employee with a role that is different than their normal work role,” Bell said. “Our plan was originally drafted based on our experiences with Hurricane Hugo. It is implemented

in part or in whole for every distribution system emergency that may arise during the year, and it is refined after each implementation to incorporate new ideas that worked well and omit items that are no longer relevant. Overall, we regard the emergency action plan as a well-constructed plan that we hope to never fully implement.”

This plan allows Santee Cooper to concentrate efforts for the quickest restoration of service to the largest number of customers in the shortest possible time frame. “The combination of well-trained and dedicated employees, new technology and detailed planning give me confidence that Santee Cooper is well prepared if we are tested by another hurricane like Hugo,” McCall said. “It was a crippling storm, no doubt, and we learned much from it that will benefit our customers today in so many ways.” **PS**

Randolph’s Landing, at the northern end of Santee Dam on Lake Marion, was littered with uprooted trees and debris, but crews from Santee Cooper and neighboring utilities began restoration efforts in full force on Sept. 22.



Santee National

Wildlife Refuge

Santee
Cooper's
Longest-
Running
Environmental
Partnership



by Willard Strong
Photos by Jim Huff

The beginnings

With humanity’s progress, there are invariably indelible effects on our natural world.

Construction of the Santee Cooper Hydroelectric and Navigation Project was no exception. Of the 193,000 acres of project lands, Lake Marion required 100,607 acres and Lake Moultrie, 59,874 acres. Clearing the acreage before the lakes were filled yielded 49 million board-feet of timber harvested and sold.

Mindful of the consequences of the nation’s largest land-clearing endeavor, the federal government, whose loan and grant enabled the state to receive an electric utility, went a progressive step further. The goal was to preserve a piece of the natural world on project lands, thus lessening the project’s impact on flora and fauna.

Marc Epstein, Santee National Wildlife Refuge manager, stands high atop the Santee Indian Mound, which offers an outstanding view of Lake Marion.



Two years into the construction of the Santee Cooper project, a foresighted U.S. Fish and Wildlife Service created the Santee National Wildlife Refuge on May 5, 1941, with an initial appropriation of \$200,000. The funds were “secured for the development of extensive wildlife conservation measures,” according to Santee Cooper’s 1941 annual report.

During the World War II era, the refuge was much larger than it is today. Originally, some 90,000 acres were leased to the U.S. Fish and Wildlife Service and then closed to public access during the “adjustment period,” when the lakes were filled.

On Nov. 12, 1941, the Santee Dam was complete and the spillway gates closed. The filling of the lakes was accomplished by early 1942, allowing the first generation of hydroelectric power at the Pinopolis Power Plant (renamed Jefferies Hydroelectric Station in 1966) on Feb. 17, 1942. Between the lakes filling and Santee Cooper’s initial power generation, the U.S. was drawn into World War II, following the attack on Pearl Harbor on that fateful Sunday, Dec. 7, 1941.

Progress at the refuge occurred even in wartime. The refuge was “designed for the protection and perpetuation of migratory waterfowl and resident species of wildlife and the stocking of the lakes with millions of fingerlings,” Santee Cooper’s 1943 annual report notes. In that report, Charley Jackson of the U.S. Fish and Wildlife Service predicted the Santee tract “would be the most important refuge on the Atlantic Flyway.”

The refuge today

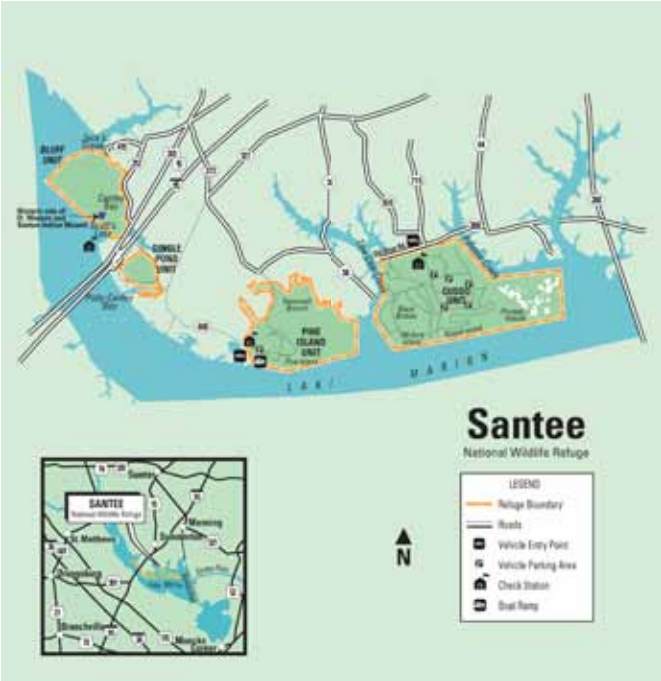
With the “adjustment period” complete, most of the lake reopened and returned to Santee Cooper for management. The refuge now contains 15,095 acres along Lake Marion in Clarendon County. Exit 102 off Interstate 95 directs motorists to the recently renovated visitor’s center. There you can find displays, maps and brochures interpreting the refuge, along with six full-time staffers led by refuge manager Marc Epstein.

As with many attractions, natural or otherwise, there can be misconceptions. “Probably the most common one is that we’re a park. We are not a park, we’re a refuge,” says Epstein, a Charleston native. “We get between 100,000 and 150,000 visitors a year.” The refuge welcomes visitors and encourages day trips, but it does not allow camping or other activities commonly associated with parks.

The refuge is a safe haven for wildlife and plants. It usually doesn’t take long to spy a duck, a Canada goose, an alligator, a white-tailed deer or a painted bunting. Bird-watching is big time at the refuge, a must-see spot for the estimated 61 million Americans who pursue the pastime.

“We have been noted as one of the best ‘birding’ areas in the state,” Epstein says proudly. The refuge practically gives new meaning to the term biodiversity. It’s home to:

- 296 bird species
- 45 mammal species
- 54 reptile species
- 35 amphibian species



“We manage water levels in impoundments to create ideal conditions for waterfowl and other species,” says Epstein. “We plant wheat and corn, employing best-management practices for optimum results throughout the refuge.”

Epstein says the Canada goose doesn’t fly much farther South, calling the refuge one of the “the last Southern extensions” of the migratory bird. Nearly 1,000 annually make their way there, with between 12,000 to 15,000 migrating ducks paying a visit.



(Left) Wetland management projects such as this one greatly enhance the biodiversity of the refuge, which is located in the state’s upper coastal plain, a transition area with examples of Lowcountry and Midlands geography.

A whitetail deer, South Carolina’s official state animal, is a very common sight throughout the refuge.



Rows of healthy corn provide a valuable food source for many species of animals.

(Bottom Left) Visitors may climb the wood steps leading to the top of the Santee Indian Mound, which originally overlooked Scott's Lake. The mound was a ceremonial focal point and burial ground. Scott's Lake was actually not a lake, but a semicircular extension of the winding Santee River. That existed prior to the damming of the river to create Lake Marion.

(Bottom Right) Ths road in the Cuddo Unit is a 7.5 -mile long "wildlife drive" affording motorists the opportunity to discover the refuge's largest single tract.



“Between the 1960s and 1970s, we had up to 40,000 geese and between 150,000 and 180,000 ducks,” Epstein says.

Chronic drought, land-use changes, shrinking waterfowl habitat in American and Canadian provinces and overharvesting have each contributed to the decline of waterfowl numbers at the refuge and throughout North America. The refuge is working to provide conditions for the migratory population to grow.

The units

The refuge is divided into four separate units. They are:

- Cuddo Unit, the largest at 6,700 acres
- Pine Island Unit
- Bluff Unit
- Dingle Pond Unit

The Bluff Unit is the location of the visitor’s center and the famous Santee Indian mound, the latter 3,500 years old. Overlooking Scott’s Lake, an arm of the Santee River prior to the lakes, it served ceremonial and burial purposes. In April 1781 patriot forces under Brig. Gen. Francis Marion and Gen. “Light Horse Harry” Lee forced a British surrender of Fort Watson, utilizing a tower constructed of local logs.

At Bluff, visitors may traverse the one-mile nature trail, where wood ducks, songbirds or small mammals reside. It features two observation decks.

Dingle Pond is essentially a Carolina Bay, with a circular depressed area that attracts wetland species such as wading birds. The great blue heron is a prime example. A one-mile walking trail beckons land-based human visitors.

“Pine Island and Cuddo units feature more diversity of habitat among the four,” Epstein says. Here visitors will find alligators,

wading birds, nesting bald eagles and grassland birds coexisting with wintering waterfowl and even swans.

Pine Island has four miles of unimproved roads. Visitation (by humans) is limited to bicycle and foot traffic.

Cuddo offers vehicle access along a seven and one-half mile “wildlife drive,” which is now closed through at least November. The road is being rehabilitated, resulting in no public access or hunting. Yes,



The American alligator has made a tremendous comeback throughout the Southeast in the last several decades. Although still officially “threatened,” its increasing numbers are largely due to the elimination of certain insecticides in the environment that adversely affected the reproduction of reptiles and birds, including the bald eagle.



hunting is allowed in certain areas at certain times in federal wildlife refuges.

“We want to let people know the Cuddo Unit will be will closed for general public access and hunting this summer and fall,” Epstein says. Hunts on the Pine Island and Bluff units will continue during September and October.

Says Epstein, “We’re trying a new program to expand the Bluff Unit Youth Hunt for adults and youth. The new program, termed Family, Friends and Kids, will be an opportunity for adults and kids to share more time together outdoors.”

The Santee National Wildlife Refuge is not immune to threats from the same progress that gave rise to it.

“The congressional legislation creating us says ‘wildlife first,” Epstein emphasizes. “The biggest threats to the refuge are area population growth and how water quality may be affected. The community around us is going to grow, and we have to educate our existing and new residents but still maintain the purpose of the refuge.”

A Charleston developer last year announced a planned community nearby that could result in 5,000 to 7,000 new residents over a 40-year period. No one knows what the recent economic downturn will mean for the project, but Epstein acknowledges adjacent change is inevitable.

Santee Cooper’s Role

Santee Cooper has a long history assisting the refuge. This past May, the utility received the Regional Director’s Conservation Award from the U.S. Fish and Wildlife Service, an award honoring Santee Cooper’s refuge support.

(Top) Wild blackberries grow in many area at the refuge.

Summer wheat, photographed under a June sky and fluttering in the breeze, is a source of sustenance for many birds.

(Opposite) The painted bunting, one of the more colorful birds in the Palmetto State, has found much desirable habitat at the refuge.

“We were pleased to be able to attend the ceremony and accept the award on behalf of Santee Cooper,” said John Inabinet, Santee Cooper’s administrator of environmental resources. “We have always had the complete support of our executive management in supporting the efforts of the U.S. Fish and Wildlife Service to manage the environmental and wildlife efforts at the refuge. This was one more recognition of the long-standing environmental stewardship commitment made by Santee Cooper.”

The agency stated it “recognizes and applauds Santee Cooper” and that the award “honors those that have made ground-breaking contributions toward fish and wildlife conservation and whose efforts and dedication are freely given to the natural world.” For example, Santee Cooper has:

- Supported and helped staff wetlands management projects, including expanding the refuge boundary
- Provided helicopter support and herbicides to treat 125 acres of invasive and exotic plants on the refuge
- Provided ground support to treat exotic and undesirable plant species
- Played an integral part in supporting the concepts of landscape conservation and refuge management
- Helped plan and execute several refuge programs including the Santee NWR Wetland Management and Enhancement Review
- Provided donations and staff assistance for the Santee Birding and Nature Festival

“Santee Cooper’s continued commitment to support refuge management and projects are providing healthier fish and wildlife habitats as well as enjoyment to the people that visit the refuge,”

the fish and wildlife agency said. “The refuge congratulates and recognizes Santee Cooper and their staff for their commitments and accomplishment in achieving meaningful results by working together with a diversity of people and disciplines to achieve a common vision for the refuge and the community around it.”

Admission to the Santee National Wildlife Refuge is free, although donations are accepted. For more information, visit www.fws.gov/santee/. **PS**



Rate Proposal Moving Forward

In April, the Santee Cooper Board of Directors voted to consider a two-year rate increase and restructuring that would raise overall customer bills an average 4.4 percent beginning in November and an additional 5.5 percent in November 2010. If approved, the rates would mark the state-owned utility's first base rate increase since 1996.

Additionally the board will consider a new rate structure that consolidates similar rate categories and implements a seasonal rate that is lower in non-summer months and higher in the summer, when it costs more to generate power.

"In restructuring our rates, Santee Cooper wanted to better reflect the seasonal differences we face in the cost of generating power," said President and Chief Executive Officer Lonnie Carter. "At the same time, it is another opportunity for us to work with customers and help them use our programs and resources to conserve energy in their homes and businesses."

The board vote set in place a period of public comment, which ran from April 24 through July 5. The board of directors is scheduled to vote on the proposal at its August meeting.

Santee Cooper Bond Sale

Santee Cooper's board of directors approved the sale of \$366,195,000 in refunding and new money bonds in a telephonic board meeting in May. Bond proceeds will be used to meet current capital needs and to refinance a portion of Santee Cooper's outstanding debt.

The sale includes \$115,025,000 in tax-exempt refunding Series A bonds, \$164,130,000 tax-exempt Series B bonds, and \$87,040,000 taxable Series C bonds. Maturities range from 2010 through 2039. The all-in true interest cost was calculated at 5.04 percent.

Fitch assigned an AA rating to the bonds, saying the rating reflects Santee Cooper's reliable and low-cost power supply and strong financial position.

New Board Appointments

Following nomination by Gov. Mark Sanford and confirmation votes in May by the South Carolina state Senate, three directors have began new terms on the Santee Cooper Board of Directors: Peggy Pinnell of Moncks Corner, W. Leighton Lord III of Columbia and Barry Wynn of Spartanburg.

Director Pinnell joined the board as a new member and filled the Berkeley County seat in a term that runs until 2014. She lives in Moncks Corner and owns a State Farm Insurance Agency there.

Director Lord filled the 2nd Congressional District seat. His term runs until 2015. He lives in Columbia and is a partner with the law firm of Nexsen Pruet.

Director Wynn began a second-term appointment to the 4th Congressional seat. His new term will expire in 2015. He lives in Spartanburg and is president of Colonial Trust Co.

2009 Power Associates

In April, Santee Cooper selected three high school seniors from Berkeley County and one each from the counties of Orangeburg, Georgetown and Horry, to participate in its 2009 Power Associates technical-career scholarship program. The Santee Cooper Power Associates program is designed to prepare students for careers in the fast-growing electric utility industry.

After graduating from high school this spring, these new Power Associates will take courses at an area technical college, pursuing an associate degree in applied science. Simultaneously, they will gain field experience while working in a generating station. The program is expected to take two years to complete and this is the third class of Power Associates to enter the program. Ideally, graduates of the Power Associates program would be eligible to be considered for job openings at Santee Cooper when they finish the program.

The three Berkeley County students are Shantal Butler, Arthur "Allen" Nelson and Brandon Tucker. They are taking courses at Trident Technical College. Denny Middleton joins the program from Orangeburg County. Middleton is taking courses at Orangeburg-Calhoun Technical College. Horry County resident Jonathan Grice and Georgetown County resident Charlene Tisdale are taking courses at Horry-Georgetown Technical College.

Santee Cooper now on Twitter

Santee Cooper has joined the vast community of corporations and individuals using Twitter, the free

online social networking service that enables its users to send 140-character updates (or "tweets") to a group of followers.

"We think that Twitter is going to be a very real-time and cost effective way to get out information to our customers," said Laura Varn, vice president of corporate communications.

Corporate communications so far has used Twitter primarily to announce news releases and energy saving tips but also recognizes the micro-blogging site's potential to keep customers informed during storms and power outages.

Twitter is just one component of Santee Cooper's social media strategy, which now includes a YouTube channel and RSS (Really Simple Syndication) capability on the utility's newsroom and green news sites. Corporate Communications is also evaluating the potential of a corporate blog to dialogue with audiences about energy conservation and other industry developments.

In the meantime, follow Santee Cooper by visiting <http://twitter.com/santeecooper> and [http://www/youtube.com/santeecoopergreen](http://www.youtube.com/santeecoopergreen). **PS**



santee cooper



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